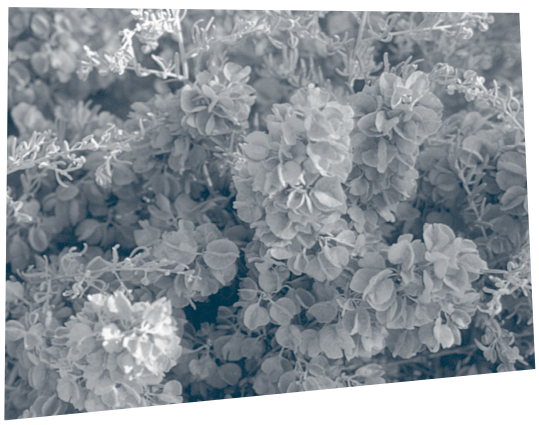
Why Go Native?

In the past, plant material research focused on the selection and advancement of species that were widely adapted, easily established, persistent, provided high quality forage for livestock and withstood moderate to heavy grazing pressure. Much of the work was on introduced species that evolved under intense grazing pressure in Eurasia and the Middle East.

The introduction of non-native species on western rangelands initially gave land managers some effective tools for carrying out range improvements. But, over time, concentrating on introduced species can limit overall species diversity and abundance. Today's need is to increase the variety of native grasses, forbs and shrubs used in range restoration to more closely replicate historic plant communities.

Some of the native grasses, forbs and shrubs commonly used for restoration are Indian ricegrass, Great Basin wildrye, blue flax, globe mallow, four-wing saltbush and big sagebrush.

Success rates indicate locally grown species fare better than the same species grown in a different state. The University of Nevada, Reno's College of Agriculture is developing local strains of Great Basin wildrye, creeping wildrye and a variety of needle–and–thread grasses. The first crop was planted last winter at the College's Newlands Research Center in Fallon.



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According to Barry Perryman, assistant professor of rangeland ecology at the Ag College, there are some commercial cultivars of Great Basin wildrye available. Commercial cultivars are developed to have a broad genetic base and offer an expectation that some seeds will grow in almost any area of the Great Basin. Breeding a broad genetic base cultivar takes 12 to 20 years; too long for the pressing needs of the public rangelands.

"The Ag College is interested in developing somewhat more local ecotypes," said Perryman. "We collected seed in areas that are similar to where we need to plant in hopes that these seeds are already adapted to these areas. This will save us time. We expect to harvest the first seeds next year and plan to have quantities available of a small grower scale within five years.

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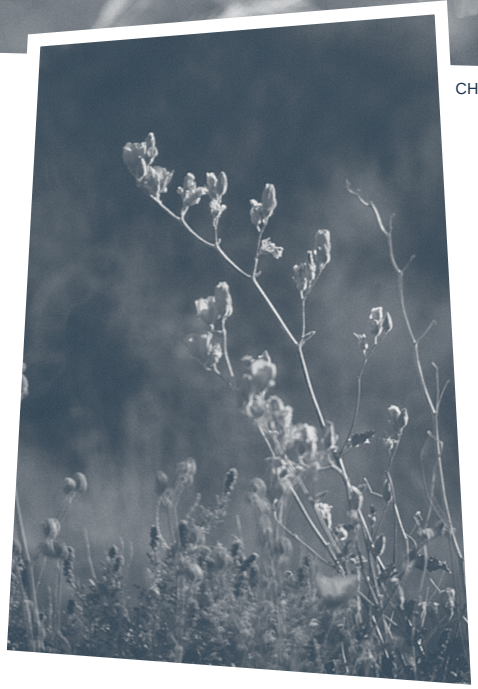

"The idea is to develop a niche market for potential seed growers who can compete in a smaller market for seeds specialized for northern Nevada," said Perryman. "Potential growers in Nevada have a difficult time competing with growers in Oregon or Utah in larger native seed markets."

Once a seed is developed that does well in certain environments, the next obstacle to overcome is seed viability. Indian ricegrass has great potential for collection and production because the seeds stay viable extremely well. Sagebrush seed is in high demand, but is one of the most difficult native seeds to deal with. It is short lived and must be kept cool. To keep sagebrush seed more than one year, it must be refrigerated.

In addition to being temperature and time sensitive, sagebrush seed is also difficult to distinguish among the three varieties used in Nevada. Basin big sage, Wyoming big sage and mountain big sage each do well under specific, different conditions, but they all look the same. Identification can be made at the source when collecting the seed or by using ultraviolet light to see the amount of reflectance, which varies among the species. Plant material research on native species is expanding and the demand for native seeds is growing. Other native species needed in Nevada are bluegrasses, bottlebrush squirreltail, needle grasses, Western yarrow, bitterbrush, low sages and winter fat.